

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1, 2, 9, 15, 18, 21, 22, and 24 are currently being amended. This amendment changes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

The examiner has objected to claims 1, 2, 9, 15, 21, 22, and 24. The applicant has amended these claims as suggested by the examiner. As such, the applicant respectfully requests the objection be withdrawn.

Claims 15 and 22 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. While the applicant disagrees with the examiner's rejection, applicant has amended the claims to be in the form of "Beauregard-type" claims directed to a computer code product *embedded in a computer readable medium*. As such, the applicant respectfully requests the rejection be withdrawn.

Claims 1, 9, 15 and 18 stand rejected under 35 U.S.C. §102(e) as being anticipated by Gupta and claims 2-8, 10-14, 16, 17, and 19-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gupta. Applicant respectfully traverses this rejection.

Gupta discloses a system for monitoring and adjusting the data transmission rate and receiver response rate in a multicasting computer network based on changes in the number of receivers in the network and/or the data-loss responses from the receivers. The sender retransmits the most requested lost data in a multicast session and transmits data which failed to reach only a few receivers in a unicast session directly to each of these few receivers.

The subject application discloses methods and systems for repairing lost data in a multicasting system. In contrast to Gupta, claims 1-20 of the subject application recite transmitting data via a point-to-multipoint session, determining if any expected data was not received, and retransmitting *all of* the not received data via the point-to-multipoint session. The subject application specifically recognizes the problems taken by the Gupta reference in

paragraphs 22 and 23 of the subject application and proposes a solution to these problems. Specifically, the subject application recognizes that retransmitting only the most NACKed packets may not lead to total error recovery. It also recognizes that determining the most requested packets may be difficult or impossible. In addition, by retransmitting all of the not received data, it is possible that some of the receivers may receive lost data in the retransmission even before sending a request for the lost data thus reducing network traffic. As such, the subject application as claimed in claims 1-20 proposes a solution to some of the problems associated with the Gupta reference.

Nothing in the Gupta reference discloses or suggests retransmitting *all of* the not received data as claimed in claims 1-20 of the subject application. In fact, Gupta discloses resending only the most NACKed packets, which causes some of the problems specifically identified and solved by the subject application. As such, the applicant respectfully submits that for this reason alone the Gupta reference neither discloses or suggests the invention as claimed in claims 1-20 of the subject application. Therefore, the application requests the rejection of claim 1-20 be withdrawn.

In addition, the Gupta reference provides absolutely no teaching or suggestion on how point-to-point repair sessions are scheduled. The examiner states that “Gupta et al. do[es] not explicitly teach scheduling point-to-multipoint repair session.” However, various claims of the subject application recite how to schedule *point-to-point* repair sessions. The section of the Gupta reference cited by the examiner (Col. 12, lines 47-51) discloses whether to multicast or unicast lost data. Additional sections of the Gupta reference cited by the examiner disclose controlling the rate at which the sender transmits data and the rate at which the receivers send lost data NACK messages back to the sender. Gupta neither discloses or suggests any method for scheduling point-to-point repair session.

In contrast, the subject application discloses and claims sending data still not received after retransmitting all of the not received data via the point-to-multipoint session in individual point-to-point sessions with specific receivers. The subject application discloses and claims various methods of scheduling the point-to-point repair sessions including using a randomization mechanism and/or sending a point-to-point repair token to the receivers

announcing when point-to-point repair will begin. Specially, claims 2-8, 10-14, 16, 17, and 19-24 of the subject application recite scheduling point-to-point repair sessions in the case when the point-to-multipoint retransmission of all lost data is unsuccessful.

Nothing in Gupta discloses or teaching how to schedule point-to-point repair sessions after a point-to-multipoint retransmission of all lost data is unsuccessful. In particular, nothing in Gupta even remotely discloses, mentions or suggests sending point-to-point repair tokens to schedule point-to-point repair sessions. As such, the applicant respectfully requests that rejection of claims 2-8, 10-14, 16, 17, and 19-24 be withdrawn.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1450. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1450. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1450.

Respectfully submitted,

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